Science, Theology, and the Simplicity of Chant: Victorian Musicology at War

Bennett Zon

The history of science and religion is littered with the terminology of warfare, especially in nineteenth-century books like John William Draper's *History of the Conflict between Religion and Science* (1875) and Andrew Dickson White's *A History of the Warfare of Science with Theology in Christendom* (1896),[1] and the language persists well into the twentieth century with J. Y. Simpson's *Landmarks in the Struggle between Science and Religion* (1952). Though frequently portrayed as mortal enemies, however, Victorian science and religion often spoke the same language, but in different dialects. They also spoke about the same things—amongst them, music. In Britain the study of music came into its own during the Victorian period, eventually professionalizing under the aegis of institutions like the Royal Academy of Music (founded 1822) and Royal College of Music (founded 1882), as well as the Musical Association, later the Royal Musical Association (founded 1874). William Spottiswoode's opening letter to the first issue of the *Proceedings of the Musical Association* (1874) gives us a good snapshot of the disciplinary constitution of Victorian musicology: "Such a Musical Society might comprise among its members the foremost Musicians, theoretical as well as practical, of the day; the principal Patrons of Art; and also those Scientific men whose researches have been directed to

---

[1] Colin A. Russell, "The Conflict of Science and Religion," in *Science and Religion: A Historical Introduction*, ed. Gary B. Ferngren (Baltimore: Johns Hopkins University Press, 2002), 3.

the science of Acoustics and to kindred inquiries."[2] As this suggests, Victorian musicology encompassed many areas of research, including history, criticism, theory and science. There is an unrepentantly scientific orientation to the early days of the society; indeed, the first issue of the *Proceedings* is entirely scientific. Elsewhere, the study of music often revolved around more practical matters, frequently concerning music of the Church. The High Church Anglican magazine *The Parish Choir* (1846–49) was probably the first to concentrate in any length on musical matters, and no sooner was it published than Church music appeared regularly in a host of Catholic and Anglican journals and newspapers.[3] On the surface these publications were as strongly biased towards theology as the *Proceedings of the Musical Association* was towards science, but over the years many of their differences eroded as theological and scientific methodologies conversed more openly. A book like John Harrington Edwards's *God and Music* (1903) typifies this kind of disciplinary crossover.

Victorian studies of chant fall into this disciplinary crossover. Some studies come from decidedly theological and Church-related sources; some are entirely scientific in origin. For theologians, chant meant principally Gregorian chant, music collected by Pope Gregory the Great (ca. 540–604) and sung to Latin words without accompaniment. Gregorian chant is the traditional music of the Church, and in Victorian Britain it experienced a great scholarly revival under the auspices of the highly Catholicizing Oxford Movement and Cambridge Ecclesiastical Movement. For scientists, chant meant principally primitive, savage chant, music representative of the earliest type of music far removed from that which would eventually coalesce into civilized Gregorian chant. Although ostensibly different, Gregorian chant and primitive chant have much in common. Both appear to reflect an early, if not original, historical position: Gregorian chant is considered to be the Church's earliest, traditional music; primitive chant is thought to be the earliest type of human music. Both rely upon the close integration of words and music: Gregorian chant follows strict rules governing the relation of text and music; primitive chant is thought to be a type of semi-musical, semi-linguistic proto-language. And because of their rudimentary nature and status, Victorians considered both "simple," expressing and embodying "simplicity." In the broadest sense, therefore,

---

[2] William Spottiswoode, opening letter, *Proceedings of the Musical Association* 1 (1874), iii.

[3] See Bennett Zon, *The English Plainchant Revival* (Oxford: Oxford University Press), 1999; and Dale Adelmann, *The Contribution of Cambridge Ecclesiologists to the Revival of Anglican Choral Worship, 1839–62* (Aldershot: Ashgate, 1997).

this article is a study of simplicity as it was understood in Victorian intellectual culture, focusing on the ways in which science and theology used simplicity to help define their disciplines through chant. It is divided into four parts: (1) background introduction to the "war" between Victorian science and religion; (2) a brief introduction to the science of simplicity, followed by a more detailed examination of the scientific simplicity of chant; (3) a brief introduction to the theology of simplicity, followed by a more detailed examination of the theological simplicity of chant; and (4) a conclusion offering an extended reflection on the nature of the scientific and theological dispute, or "peace," and its implications for the history of musicology.

I. INTRODUCTION: SCIENCE AND RELIGION AT "WAR"

Despite the imagery of war, by the middle of the nineteenth century the languages of science and religion had only partially separated. Gillian Beer illustrates this in her work on Darwin's language, linking its rich metaphorical vocabulary to a wide-ranging literary pedigree, or "omnivorous reading."[4] Indeed, what Darwin himself would later call his "muddle" encapsulates the nature of such fluid interdisciplinary traffic.[5] The muddle is evident in agnostic Darwin's theological relapse in the second edition of *The Origin of Species* (1860). The first edition ends, "There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one";[6] the second, "There is a grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one."[7] Darwin's muddle summarizes decades of scientific confusion, beginning at the end of the eighteenth century with the writings of William Paley, author of many important books, including *Principles of Moral and Political Philosophy* (1785), *Evidences of Christianity* (1794) and *Natural Theology; or Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature*

---

[4] Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 2nd ed. (Cambridge: Cambridge University Press, 2000), 27.
[5] Charles Darwin, *More Letters of Charles Darwin: A Record of his Work in a Series of Hitherto Unpublished Letters*, ed. Francis Darwin and A. C. Sward, 2 vols. (London: John Murray, 1903), 1:321.
[6] Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (London: John Murray, 1859), 490.
[7] Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, 2nd ed. (London: John Murray, 1860), 490.

(1802). Paley expostulates what we call today intelligent design; for him the natural world arose "from the wisdom of an intelligent and designing Creator."[8] Best known for his "watch analogy," Paley discovers a watch on the beach, and perceiving its function and intricacy concludes that it was purposefully designed by a maker. Simply put, the watch is nature; the maker, God. But behind such a simple metaphor lies a complex set of ideas. According to Alister McGrath, the watch analogy hinges on Paley's understanding of "contrivance," a concept intended to express the systemic interrelatedness of divinely created things.[9] "Contrivance," Paley argues, "proves design: and the predominant tendency of the contrivance indicates the disposition of the designer."[10] Yet by its very nature contrivance also evinces complexity: "We deduce design from relation, aptitude, and correspondence of *parts*. Some degree therefore of *complexity* is necessary to render a subject fit for this species of argument."[11] Inexplicably, however, Paley applies contrivance to God's creation selectively so that not all of God's creation evinces complexity. Unlike the human eye, for example, the planets and stars express "simplicity."[12] Apart from anything else, this confusion (which Darwin inherited and only partially resolved for future generations) makes God seem consistently inconsistent.

Paley's inconsistency institutionalized confusion between science and theology throughout the nineteenth century, and Darwin's muddle only made matters worse. Many post-Darwinian writers exploited the confusion for their own ends, especially those arbitrating between science and theology. Historian James Moore divides these into two types according to contemporary brand of evolutionary theory. "Christian Darwinists" sought to reconcile Darwinism and religion; "Christian Darwinisticists" subscribed to an earlier, non-Darwinian paradigm of evolutionary theory.[13] But in practice this division is illusory, because in the ideologically multiplicitous environment of Victorian Britain no single evolutionary theory was consensually agreed—like religion itself it was an agglomeration of different, often

---

[8] William Paley, Natural Theology: or, Evidences of the Existence and Attributes of the Deity, 12th ed. (London: J. Faulder, 1809), 230.

[9] See Alister E. McGrath, *Darwinism and the Divine: Evolutionary Thought and Natural Theology* (Chichester: Wiley-Blackwell, 2011), 91–97.

[10] Paley, *Natural Theology*, 467.

[11] Ibid., 379, italics in original.

[12] Ibid.

[13] James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870–1900* (Cambridge: Cambridge University Press, 1979), 218–20.

competing ideologies. Christian Darwinisticist, academic and Archbishop of Canterbury Frederick Temple emblematizes this:

> The marks of design which [Paley] has pointed out remain marks of design still even if we accept the doctrine of Evolution to the full. . . . In the one case the Creator made the animals at once such as they are now; in the other case He impressed on certain particles of matter which, either at the beginning or at some point in the history of His creation He endowed with life, such inherent powers that in the ordinary course of time living creatures such as the present were developed. The creative power remains the same in either case; the design with which that creative power was exercised remains the same. He did not make the things, we may say; no, but He made them make themselves.[14]

The period is awash with heterodox evolutionary views. Novelist Samuel Butler determines that "the design which has designed organisms, has resided within, and been embodied in, the organisms themselves."[15] Like Temple, Butler espouses a Palean (and remarkably un-Darwinian) evolutionary teleology in which God creates creatures with the ability to evolve themselves. Christian Darwinists are no better at clarifying the situation. The eminent American botanist Asa Gray, one of Darwin's closest friends, talks of "Darwinian teleology,"[16] totally disregarding the fact that teleology is inimical to Darwin. For Darwin evolution is completely aimless; there is no designer, only natural selection, the struggle for survival and adaptation to the environment. As these examples show, the semi-scientific, semi-theological musings of Gray, Butler and Temple—whether Christian Darwinist or Darwinisticist—did nothing to dispel Victorian confusion, nor did polemically titled books like American Congregationalist Lyman Abbot's *Theology of an Evolutionist* (1897). For much of the popular Victorian

---

[14] Frederick Temple, "Lecture IV: Apparent Conflict Between Religion and the Doctrine of Evolution," in *The Relations between Religion and Science: Eight Lectures Preached Before the University of Oxford in the Year 1884* (London: s.n., 1903), http://www.gutenberg.org/files/17194/17194.txt (accessed October 17, 2012).

[15] Samuel Butler, *Evolution, Old & New, Or, the Theories of Buffon, Dr. Erasmus Darwin and Lamarck, as Compared with that of Charles Darwin*, 3rd ed. (New York: E. P. Dutton & Co., 1911/1879), 31.

[16] Asa Gray, "Evolutionary Teleology," in *Darwiniana: Essays and Reviews Pertaining to Darwinism* (New York: D. Appleton and Co., 1889/1876), 378; also found at https://archive.org/details/darwinianaessay00graygoog.

imagination, religion and science continued to speak the same language, if in different dialects.

II. THE SCIENTIFIC SIMPLICITY OF CHANT

The Science of Simplicity

Not only did religion and science speak the same language in different dialects; occasionally they shared vocabulary—like the word "simple." As we have already seen, Paley uses the word to distinguish the simple objects of astronomy from the complex objects of biology. Following Paley, scientist Richard Owen defines complexity in similarly mechanical terms, yet for Owen there is a deep manifestation of simplicity at the root of complexity:

> [Animal mechanisms of mobility] differed from the artificial instruments which we ourselves plan with foresight and calculation for analogous uses, save in their greater complexity, in their perfection, and in the unity and simplicity of the elements which are modified to constitute these several locomotive organs. Everywhere in organic nature we see the means not only subservient to an end, but that end accomplished by the simplest means. Hence we are compelled to regard the Great Cause of all, not like certain philosophic ancients, as a uniform and quiescent mind, as an all pervading anima mundi, but as an active and anticipating intelligence.[17]

Owen's uncompromisingly theistic interpretation leaves no doubt that biological progress originates in divine simplicity and evolves into human complexity. This encapsulates his later, fundamental disagreement with Darwin by locating simplicity and complexity within a teleological vector. Simplicity, for Owen, represents life at its most uncompromisingly rudimentary—on the verge of emergent creation, part incarnation, part creation. For Darwin, simplicity and complexity are not teleological stages towards perfection, but manifestations of change through adaptation: "[I]n the case of any organ, if we know of a long series of gradations in complexity, each good for its possessor, then, under changing conditions of life, there is no

---

[17] Richard Owen, *On the Classification and Geographical Distribution of the Mammalia* (Cambridge: Cambridge University Press, 1859), 62.

logical impossibility in the acquirement of any conceivable degree of perfection through natural selection."[18]

For many Victorians the natural world was predicated on a teleological progression from simplicity to complexity. This view is abundant in the writings of agnostic evolutionist Herbert Spencer (1820–1903), arguably the most significant evolutionary influence in a culture rooted in predominantly non-Darwinian evolutionism.[19] Drawing upon an extensive and selective reading of German natural philosophy and early embryology, Spencer developed a theory of evolution applicable to all organic and inorganic matter called "synthetic philosophy." From embryologist Ernst von Baer (1792–1876) he took the axiom of increased differentiation: (1) "The general features of a large group of animals appear earlier in the embryo than the special features"; and (2) "Less general characters are developed from the most general, and so forth, until finally the most specialized appear."[20] Spencer translates these into axiomatic pronouncements on evolution:

> [T]his law of organic progress is the law of all progress. Whether it be in the development of the Earth, in the development of Life upon its surface, the development of Society, of Government, of Manufactures, of Commerce, of Language, Literature, Science, Art, this same evolution of the simple into the complex, through a process of continuous differentiation, holds throughout. From the earliest traceable cosmical changes down to the latest results of civilization, we shall find that the transformation of the homogeneous [simple] into the heterogeneous [complex], is that in which Progress essentially consists.[21]

From German biologist and evolutionary philosopher Ernst Haeckel (1834–1919) Spencer took the theory of recapitulation; for Haeckel, "Ontogeny is the short and rapid recapitulation of phylogeny. . . . During

---

[18] Darwin, *On the Origin of Species* (1859), 204.

[19] See Peter J. Bowler, *The Non-Darwinian Revolution: Reinterpreting a Historical Myth* (Baltimore: Johns Hopkins University Press, 1988); and Bennett Zon, "The 'Non-Darwinian' Revolution and the Great Chain of Musical Being," in *Evolution and Victorian Culture*, ed. Bernard Lightman and Zon (Cambridge: Cambridge University Press, forthcoming).

[20] Quoted in Steven Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass.: Harvard University Press, 1977), 56.

[21] Herbert Spencer, "Progress: Its Law and Causes," *Westminster Review* 67 (April 1857): 445–47.

its own rapid development . . . an individual [embryo] repeats the most significant changes in form evolved by its ancestors during their long and slow paleontological development."[22] As illustrated in Figure 1, this means that the growth of the individual embryo (ontogeny) recapitulates the growth of the species (phylogeny), so that the human embryo passes in gestation through successive stages of evolution, from protozoa to invertebrate and vertebrate to mammal. Haeckel converts this into a vertical image of the magisterial tree of life crowned by man.

Spencer's synthesis of von Baer (differentiation) and Haeckel (recapitulation) appealed to a Victorian environment at ease with teleological concepts placing civilized European man on top and primitive savages at the bottom of the Great Chain of Being, illustrated in Figure 2 by Charles Bonnet's late eighteenth-century *Natural and Philosophical History*. As such simplicity became the anthropological metaphor of choice for anything rudimentary, undeveloped or unevolved.

The term appears throughout Enlightenment thought, but it reaches an early apogee in the work of early nineteenth-century anthropologist James Cowles Prichard (1786–1848). Prichard uses the term abundantly in *Researches into the Physical History of Mankind* (1813), often in conjunction with the comparative anthropological view that savagery or primitiveness denotes antiquity: "The simple and primitive form of the Polynesian grammar is one indication of its greater antiquity."[23] The trope of simplicity retained currency throughout the Victorian period, culminating in the seminal writings of anthropologist and arch-teleologist E. B. Tylor (1832–1917), generally considered the most important cultural evolutionist of the Victorian period.[24] Writing about mythology in frankly Spencerian terms in his *Primitive Anthropology* (1871), Tylor claims that "[s]cience, investigating nature, discusses its facts and announces its laws in technical language which is clear and accurate to trained students, but which falls only as a mystic jargon on the ears of barbarians, or peasants, or children. It is to the comprehension of just these simple unschooled minds that the language of poetic myth is spoken."[25] Tylor cast an enormous influence (or

---

[22] Ernst Haeckel, *Generelle Morphologie des Organismen*, 2 vols. (Berlin: Georg Reimer, 1866), 2:300; quoted in Gould, *Ontogeny and Phylogeny*, 76–77.

[23] James Cowles Prichard, *Researches into the Physical History of Mankind* (3rd ed., London: Sherwood, Gilbert and Piper, 1847), 5:19.

[24] James Urry, *Before Social Anthropology: Essays on the History of British Anthropology* (Reading: Harwood Academic, 1993), 21.

[25] Edward B. Tylor, *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art, and Custom*, 5th ed., 2 vols. (London: John Murray, 1913/1871), 1:316.
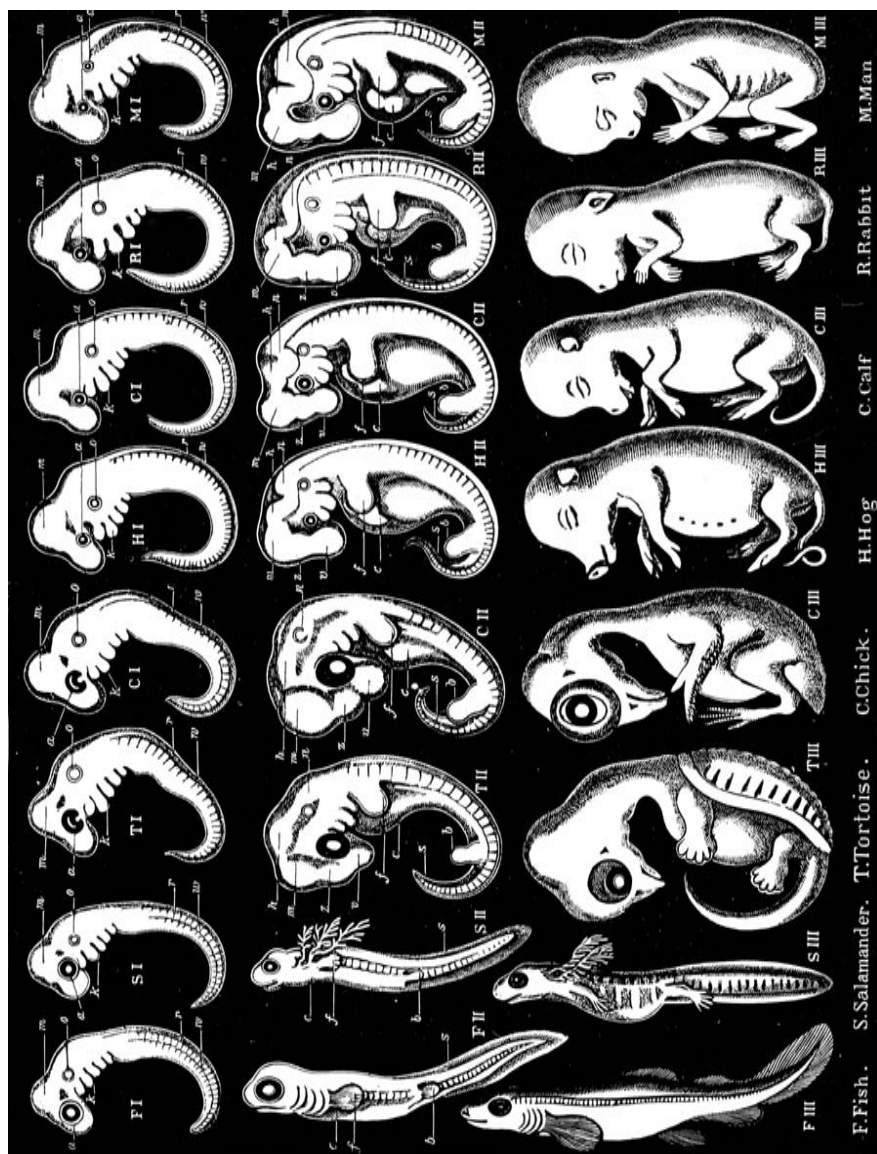
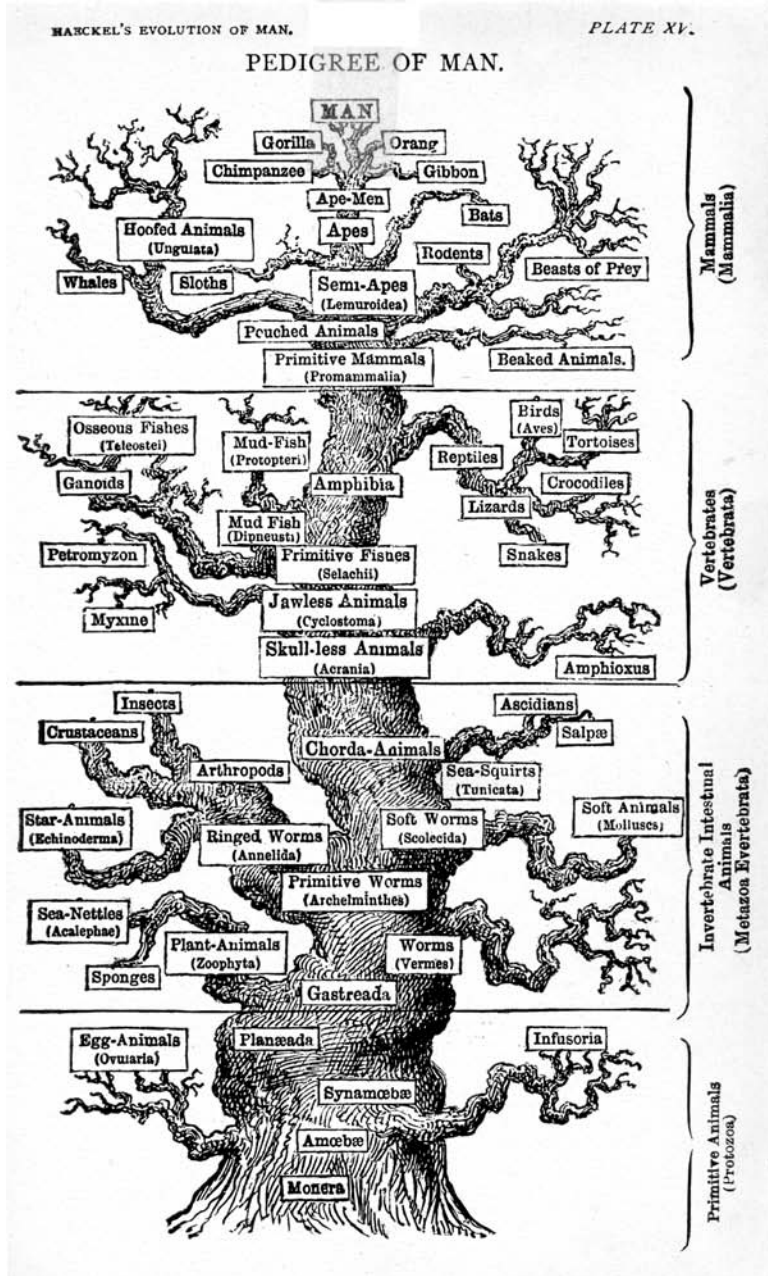FIGURE 1a: Ernst Haeckel, *Anthropogenie* (1874).

FIGURE 1b: Ernst Haeckel, *The Evolution of Man* (1879), originally from *Anthropogenie* (1874).
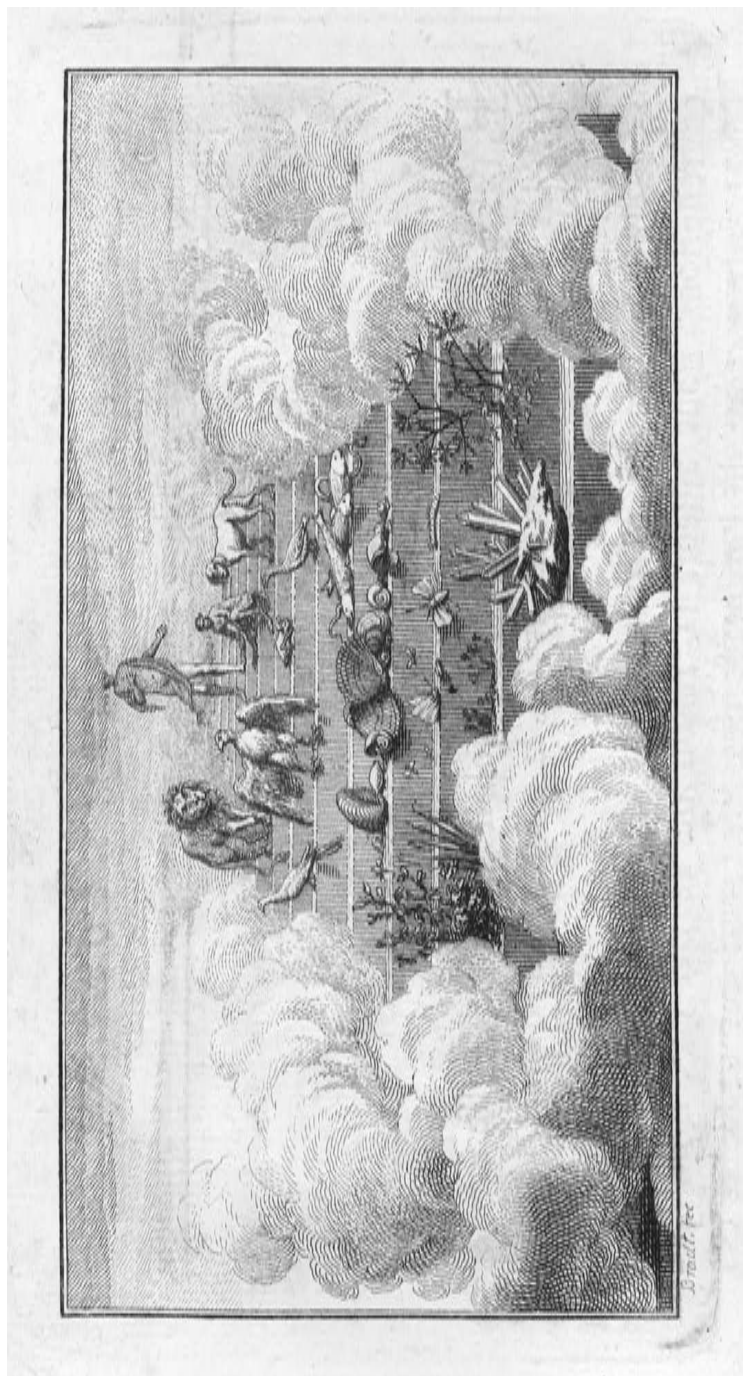
FIGURE 2: Charles Bonnet, *Œuvres d'histoire et de philosophie* (1779–83). Permission granted, Cambridge University Library.

shadow) over contemporary anthropological thought, extending into all spheres of culture.

The Scientific Simplicity of Chant

While simplicity entered the ideological lexicon of Victorian anthropology, it also entered into the bloodstream of Victorian musical culture and from that into the popular historiography of chant. Spencer capitalized on its appeal to construct and defend the argument behind his influential essay "The Origin and Function of Music" (1857), one of the first essays to postulate evolutionary origins for music. Spencer contends that music originates in human, impassioned speech:

> [V]ocal peculiarities which indicated excited feeling *are those which especially distinguish song from ordinary speech*. Every one of the alterations of voice which we have found to be a physiological result of pain or pleasure *is carried to an extreme in vocal music* . . . in respect alike of *loudness, timbre, pitch, intervals,* and *rate of variation*, song employs and exaggerates the natural language of the emotions; it arises from a systematic combination of those vocal peculiarities which are physiological effects of acute pleasure and pain.[26]

From its origins in impassioned speech, music develops into a recognizable historical narrative from the simple to the complex:

> In music progressive integration is displayed in numerous ways. The simple cadence embracing but a few notes, which in the chants of savages is monotonously repeated, becomes, among civilized races, a long series of different musical phrases combined into one whole; and so complete is the integration that the melody cannot be broken off in the middle nor shorn of its final note, without giving us a painful sense of incompleteness. When to the air, a bass, a tenor, and an alto are added; and when to the different voice-parts there is joined an accompaniment; we see integration of another order which grows naturally more elaborate. And the process is carried a stage higher when these complex solos,

---

[26] Herbert Spencer, "The Origin and Function of Music," *Fraser's Magazine* (October 1857), repr. in *Literary Style and Music: Including Two Short Essays on Gracefulness and Beauty* (New York: Philosophical Library, 1951), 57–58, italics in original.

concerted pieces, choruses, and orchestral effects are combined into the vast ensemble of an oratorio or a musical drama.[27]

True to synthetic philosophy, Spencer translates musical origins into a developmental paradigm exemplified in the sliding scale of the Great Chain of Being, from simplest to most complex—from most savage to most civilized.

As shown above in Figure 3, at its most rudimentary position are savages, with their monotonous, barely evolved "dance-chants" akin to the earliest expressions of man:

> That music is a product of civilization is manifest; for though some of the lowest savages have their dance-chants, these are of a kind scarcely to be dignified by the title musical: at most, they supply but the vaguest rudiment of music, properly so called. And if music has been by slow steps developed in the course of civilization, it must have been developed out of something. If, then, its origin is not that above alleged, what is its origin?[28]

By giving chant such an important, transitional position in the history of musical origins, Spencer ensured that the trope of simplicity would become ingrained in Victorian histories of music. Composer and historian C. Hubert H. Parry (1848–1918) was probably the most prolific Spencerian musicologist of the time, translating music history into the epitome of synthetic philosophy. For Parry it is impossible

> to understand its [music's] qualities and characteristics, or to realise justly the light it throws upon the state of music in our own time, without tracing the conditions which led to it, and following the steps from the small and insignificant beginnings to the masterpieces which we regard as triumphs of our art. . . . The study of the steps from elementary simplicity up to our complex condition of art shows how progression after progression became admissible by being made intelligible.[29]

Paraphrasing Spencer, Parry equates folk with savage music in *The Art of Music* (1893; in 1896 retitled *The Art of the Evolution of Music*):

---

[27] Herbert Spencer, "The Law of Evolution," in *First Principles*, 2nd ed. (London: Williams and Norgate, 1867), chap. 14, sec. 114, http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=1390&chapter=99228&layout=html&Itemid=27 (accessed September 13, 2012).

[28] Spencer, "Origin and Function," 68.

[29] C. Hubert H. Parry, "On Some Bearings of the Historical Method Upon Music," *Proceedings of the Musical Association* 11 (1884): 3–4.
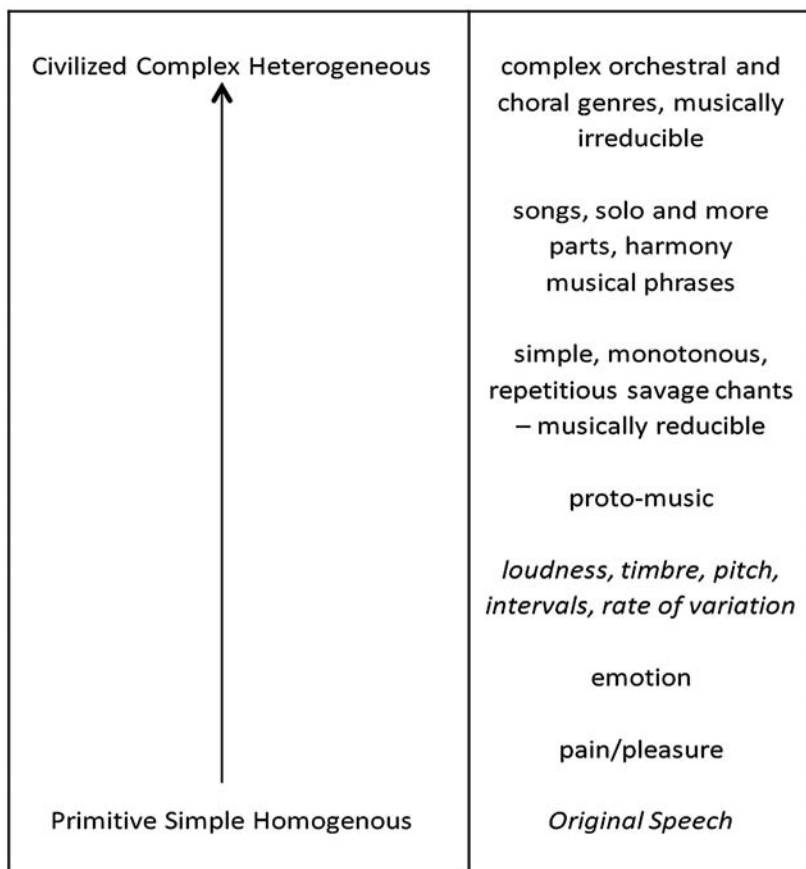
Civilized Complex Heterogeneous	complex orchestral and choral genres, musically irreducible
↑	songs, solo and more parts, harmony musical phrases
	simple, monotonous, repetitious savage chants – musically reducible
	proto-music
	loudness, timbre, pitch, intervals, rate of variation
	emotion
	pain/pleasure
Primitive Simple Homogenous	*Original Speech*

FIGURE 3: Spencer's Great Chain of Musical Being.

The basis of all music and the very first steps in the long story of musical development are to be found in the musical utterances of the most undeveloped and unconscious types of humanity, such as unadulterated savages and inhabitants of lonely isolated districts well removed from any of the influences of education and culture. Such savages are in the same position in relation to music as the remote ancestors of the race before the story of the artistic development of many began.[30]

---

[30] C. Hubert H. Parry, *The Art of Music* (London: Kegan Paul, Trench, Trübner, & Co., 1893), 52.

As such, incipient music—be it savage or folk (which is seemingly neither savage nor civilized)—is customarily simple: a chant of Australian savages represents a "simple figure"; folk music of British Columbia alternates "simple figures"; and a Romanian folk song is "unusually simple in part, but very characteristic as a whole"; "folk tunes of the world are simple patterns."[31] Reluctant to give pre-Christian music its own ontological identity, Parry redefines Christian chant (or what he calls plain song) as "incipient harmony."[32] Confusingly, as incipient harmony Christian chant is not what it *is*, but what it *represents* for the future. And what it represents for the future is not simple but complex, because according to Spencerian logic all music progresses from the simple to complex, and at all stages in the development of music lower forms recapitulate higher ones.

The disembodied, transitional nature of chant has a long historiographical presence in British musicology, frequently if not invariably communicated through concepts of anthropological simplicity allied to Orientalism.[33] At its ideological worst, Victorian Orientalism furnished musicology with classically circular reasoning, imputing to chant savageness because it had not evolved. Unevolved—or worse still, degenerated—under the guise of Orientalism, chant came to symbolise something far more than simplicity itself. Acquiring the cipher of incompleteness, it provided some historians with the unfavourable musical narrative they sought to explain the developmental superiority of Western (Christian) music.[34] Popular travel literature, chronicling voyages from all over the non-Western world, confirmed this attitude with examples of music from places as diverse and distant as Japan, China, India, Burma, Java, Borneo, Fiji, New Zealand, Tasmania, Egypt and many other parts of Africa, to name but a few.[35] Egyptian explorer and classic degenerationist Edward Lane typifies the attitude of this literature when he claims that the muëddins of Cairo "have harmonious and sonorous voices," and although they contradictorily

---

[31] Ibid., 54, 57, 65, 68.

[32] Ibid., 92.

[33] See Bennett Zon, " 'Violent Passions' and 'Inhuman Excess': Simplicity and the Representation of Non-Western Music in Nineteenth-Century Travel Literature," in *Music and Orientalism in the British Empire, 1780s–1940s: Portrayal of the East*, ed. Martin Clayton and Zon (Aldershot: Ashgate, 2007), 209–35.

[34] Bennett Zon, "Victorian Anti-Semitism and the Origin of Gregorian Chant," in *Renewal and Resistance: Catholic Church Music from the 1850s to Vatican II*, ed. Paul Collins (Oxford: Peter Lang, 2010), 99–119.

[35] For the fullest account of nineteenth-century British approaches to non-Western music, see Bennett Zon, *Representing Non-Western Music in Nineteenth-Century Britain* (Rochester, N.Y.: University of Rochester Press, 2007).

strain them "to the utmost pitch; yet there is a simple and solemn melody in their chants."[36] Lane's regret registers a commonly held belief. Even its own simplicity can be ruined by Oriental ignorance: "Most of the popular airs of the Egyptians, though of a similar character, in most respects . . . are very simple, consisting of only a few notes, which serve for every one or two lines of a song, and which are therefore repeated many times."[37] Historian George Hogarth reflects this same popular opinion. While chant "probably resembled very much the rude, but frequently grand and imposing music still to be heard in various parts of the East, consisting of very simple strain or melody,"[38] the Hebrews' music is simple, their "history is that of a continual decline."[39] By the 1860s Hogarth's view seemed to prevail. Historian and musicologist Henry Wylde praises Jewish worship as "pure and simple,"[40] complaining, however, that its influence marked early Christian music with a "lack of artistic feeling and the stern asceticism . . . an antagonistic element to the progress of civilization."[41] Composer John Stainer echoes Wylde: "That *monotone*, when used from century to century in the mouth of devout readers, will grow into a *cantillation*, or rude sort of chant, can be proved by the history of our early Church plain-song. Why should not the Hebrews have passed in their days through the same phase of musical development which other nations have done?"[42] And derisively, organist Friedrich Weber claims that early Christians "could learn to sing the simple and natural Hebrew melodies, if they did not know them already from childhood."[43] Speaking for the Spencerian multitude, C. Hubert H. Parry argues that "[m]usic was only cultivated by Churchmen and was of the simplest description—confined to melody only, and indefinite in pitch and rhythm."[44]

For these implicitly anti-Semitic historians, Hebrew chant was just like

---

[36] Edward William Lane, *An Account of the Manners and Customs of Modern Egyptians, Written in Egypt during the Years 1833, -34, and -35* (London: John Murray, 1860), 73.
[37] Ibid., 354.
[38] William Hogarth, *Musical History, Biography, and Criticism: Being a General Survey of Music, from the Earliest Period to the Present Time* (London: John W. Parker, 1835), 6.
[39] Ibid.
[40] Henry Wylde, *Music in Its Art-Mysteries* (London: L. Booth, 1867), 113.
[41] Ibid., 113–14.
[42] John Stainer, *The Music of the Bible, with an Account of the Development of Modern Musical Instruments from Ancient Types* (London: Novello, Ewer & Co., [1879]), 165 (emphasis original).
[43] Friedrich Weber, *A Popular History of Music from the Earliest Times* (London: Simpkin, Marshall, Hamilton, Kent & Co., 1891), 178.
[44] C. Hubert H. Parry, *Summary of the History and Development of Mediaeval and Modern European Music* (London: Novello and Co., 1893), 1.

its savage counterpart—undeveloped, unrefined and developmentally incomplete. More importantly, it converted scientific simplicity from an objective appreciation of form into a subjective depreciation of content. As music history this made sense in the synthetic philosophical programme which unified all creation under one evolutionary scheme. Musical simplicity reaffirmed the veracity of Spencer's thesis by reaching beyond the limitations of his anthropological model into the musical history of an irrefutably living civilization (the Jews), unexpectedly helping to prove Spencer's theory of musical origins. No matter how simple, Hebrew chant, unlike savage chant, proves that music can evolve—and should evolve into something gradually better, more advanced and increasingly complex, which at its most civilized recapitulates the totality of human evolution. Even if Jewish music did eventually degenerate, it was thankfully perfected by Christians, and through civilized Christian treatment it became rich in "incipient harmony."

III. THE THEOLOGICAL SIMPLICITY OF CHANT

The Theology of Simplicity

Parry's concept of chant's incipient harmony encapsulates Spencer's combination of differentiation and recapitulation by giving the impression that higher, more complex forms evolve ineluctably from lower, simpler ones, recapitulating each successive stage in turn. Though seemingly discreet intellectual propositions, differentiation and recapitulation share one important feature: in Spencer they articulate an inherently unified teleological process. Spencer adumbrates this when in *First Principles* he elides what he calls the Knowable and the Unknowable in an endless teleological projection. At is most basic level the Knowable is the Simple—an observable, "un-unified" and disparate effect; the Unknowable—the Complex—is a cause or "manifestation of an unlimited and incomprehensible Power."[45] As illustrated below in Figure 4, these form an infinite succession of serially overlapping concepts progressing ineluctably from simplicity to complexity.

   As the Knowable (simple) progresses towards the Unknowable (complex), the Unknowable transmutes into the Knowable (simple), itself driving towards the Unknowable (complex) in turn:

---

[45] Quoted in F. Howard Collins, *An Epitome of the Synthetic Philosophy* (London and Edinburgh: Williams and Norgate, 1894), 18, 13.
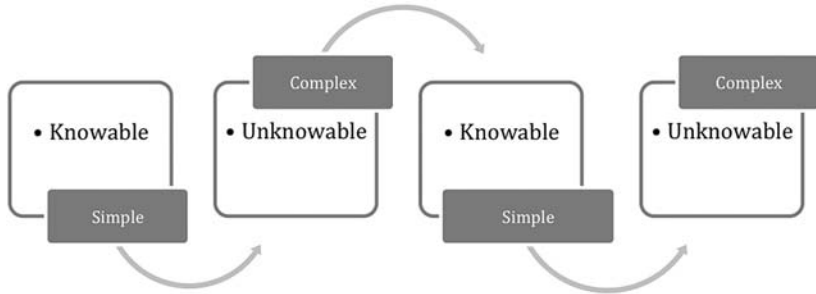
FIGURE 4: Knowable and Unknowable.

> The progress of Science, in grouping particular relations of phenomena under laws, and these special laws under laws more and more general, is of necessity a progress to causes that are more and more abstract—less and less conceivable. Hence the most abstract conception to which Science is ever slowly approaching, is one that merges into the inconceivable or unthinkable. And so is justified the assertion, that the beliefs which Science has forced upon Religion, have been intrinsically more religious than those which they supplanted. And this unscientific characteristic of Science, has all along been a part cause of its conflict with Religion.[46]

The ontological unity Spencer derives from the endlessly cyclical teleology of the Knowable and Unknowable is drawn from his consideration of matter:

> Matter is either infinitely divisible [i.e., complex], or it is not [i.e., simple] . . . If we say that Matter is infinitely divisible, we commit ourselves to a supposition not realisable in thought. For really to conceive the infinite divisibility of Matter, is mentally to follow out the division to infinity; and to do this would require infinite time. On the other hand, to assert that Matter is not infinitely divisible, is to assert that it is reducible to parts which no conceivable power can divide; and this verbal supposition can no more be represented in thought than the other. Matter then, in its ultimate nature, is absolutely incomprehensible as Space and Time.[47]

---

[46] Ibid., 13–14.
[47] Ibid., 8.

While for Spencer the unity inhering within matter carries no direct religious message, its theological implications were observed by his contemporaries. The Rev. George Ladd teases these out in *On the Unknown God of Herbert Spencer* (1900), helping readers uncover the theological truth behind Spencer's philosophical belief. For Ladd, as many others, Spencer's Unknown (and by virtue of it the Known) is God in all but name:

> [T]he Unknowable is known to be a Power; and it must be a great Power, for the *Universe*—that is, all manifestations of power—is manifest to us. But power, inconceivably great—enough to accomplish all things done and even more—has been by Theists from time immemorial held to be an attribute of God. But Mr Spencer speaks of *the* Power; and as he nowhere uses the plural and doubtless holds to the unity of the Universe, having himself made an attempt to represent in philosophy this unity of the universe, he must believe in the unity also of the Power which the one universe manifests.[48]

For Spencer in *First Principles*, though "Spirit and Matter [are antithetical conceptions] . . . the one is no less than the other to be regarded as but a sign of the Unknown Reality which underlies both."[49]

For theologians eager to find God more than the Unknown Reality, the attribution of unity was an essential prerequisite integrating simplicity and complexity within a single concept of divinity. Otherwise known as "the doctrine of divine simplicity," this historically and denominationally fluid concept probes the meaning of "simple," "composite" and "parts" in relation to the existence and essence of God. According to seventeenth-century divine Stephen Charnock,

> God is the most simple being; for that which is first in nature, having nothing beyond it, cannot by any means be thought to be compounded; for whatsoever is so, depends upon the parts whereof it is compounded, and so is not the first being: now God being infinitely simple, hath nothing in himself which is not himself, and therefore cannot will any change in himself, by being his own essence and existence.[50]

---

[48] Rev. George T. Ladd, *Lectures on the Unknown God of Herbert Spencer: And the Promise and Potency of Prof. Tyndall* (Milwaukee: I. L. Hauser & Co., 1900), 24, italics in original.

[49] Quoted in Collins, *Epitome*, 63.

[50] Stephen Charnock, *The Existence and Attributes of God*, 2 vols. (1682; repr., Grand Rapids, Mich.: Baker, 1979), 1:333.

Thomas Aquinas puts it similarly: "[E]very composite is posterior to its components: since the simpler exists in itself before anything added to it for the composition of a third. But nothing is prior to the first. There, since God is the first principle, He is not composite."[51] According to James Dolezal, numerous aspects of the Christian doctrine of God rely upon just this kind of simplicity, including unity, necessity, immutability, self-sufficiency, independence, perfection, and infinity.[52] Moreover, these attributes are "so radically unlike anything found in creatures that he [God] cannot be classified together with them in a single order of being or as the highest link on a great chain of being."[53] In nineteenth-century theology, the doctrine of divine simplicity coalesced under the influence of an organic philosophy situating unity within diversity and parts within wholes. Catholic Tübingen theologian Franz Anton Staudenmaier (1800–56) exemplifies the doctrine of divine simplicity, emphasizing, as Bradford Hinze observes, "the power of the Spirit working to bring about individuation: naturally given predispositions charismatically realized."[54] Staudenmaier maintains in *Die Lehre von der Idee* that "[t]he world is God's idea of the world brought into being, and the perfection of the original world consisted in the fact, that it absolutely corresponded to the Divine idea."[55] Rooted in incarnational Christology, Staudenmaier contends that "the historical process is itself a revelation of the Absolute: the meaning of history is to be identified as the history of God . . . [as] a vision of history where, as in a covenant dialogue, divine hypostases are disclosed *for the sake of personal union* with their human images."[56] Gerald McCool situates divine hypostases within overarching concepts of divine simplicity:

> For Staudenmaier, God's freedom became the fundamental condition for the realization of God's Kingdom. God's providence

[51] Thomas Aquinas, *Thomas Aquinas's Earliest Treatment of the Divine Essence: Scriptum super libros Sententiarum, Book 1, Distinction 8*, trans. E. M. Macierowski (Albany, N.Y.: SUNY Press, 1997), I.8.4.1.

[52] James E. Dolezal, *God Without Parts: Divine Simplicity and the Metaphysics of God's Absoluteness* (Eugene, Or.: Wipf and Stock Publishers, 2011), 10, loc. 371 (Kindle).

[53] Ibid., 29, loc. 744.

[54] Bradford E. Hinze, "Roman Catholic Theology: Tübingen," in *The Blackwell Companion to Nineteenth-Century Theology*, ed. David Fergusson (Chichester: Wiley-Blackwell, 2010), 208.

[55] Quoted in Rev. Henry Formby, *The Roman Ritual and its Canto Fermo Compared with the Works of Modern Music in Point of Efficiency and General Fitness for the Purposes of the Catholic Church* (London: James Burns, 1849), xi.

[56] Aidan Nichols, "Catholic Theology of the Trinity in the Nineteenth Century," in *The Oxford Handbook of the Trinity*, ed. Gilles Emery, O.P., and Matthew Levering (Oxford: Oxford University Press, 2010), 285, italics in original.

became the ground of God's active intervention in the causally linked system of the world's events. Consequently Christianity became the intelligibly linked system of divine freedom and divine personality in their exterior expression. There was an intelligibility in sacred history, but its ground was the undeducible divine freedom and not the metaphysical necessity of a divine architectonic idea.[57]

The Theological Simplicity of Chant

The undeducible nature of divine simplicity typifies Victorian writers utilizing theological hermeneutics to define the nature of chant. Citing Rousseau, a reviewer of George Hogarth's *Musical History, Biography and Criticism* (1835) claims that ecclesiastical chant's simple, integrated relationship of words and music connotes a purity inscribed with the indivisibility of divine essence. For Rousseau "the Gregorian chant . . . [is] without measure and rhythm, and wholly in the diatonic genus . . . [it] can be said to be preserved in all its purity in the *canto fermo* [Gregorian chant] alone."[58] For like-minded advocates, be they Anglican or Catholic, practitioner, apologist or both, Gregorian chant not only reflects the uniquely immutable relationship of words and music, but the synchronic relationship of music and the minds of God's people. Anglican arch-Gregorian Thomas Helmore, for instance, opens *Accompanying Harmonies to the Psalter Noted* (1849) with an epigraph from Justin Martyr: "Simple and plain singing is left in Churches."[59] Reflecting Martyr, Helmore tellingly defines "the Plainsong of Christendom" as "Simple in itself, representing something entirely different from the measure song of other music, yet not without measure of its own,— containing in its few forms the records of the holy songs of many generations."[60] A Catholic writer for the *Dublin Review* claims much the same:

> The notes of the Gregorian melodies are few, simple, and confined to the sounds of the natural or diatonic scale; and yet, by the diversity of their modes, they have great variety of character and

---

[57] Gerald A. McCool, S.J., *Nineteenth-Century Scholasticism: The Search for a Unitary Method* (New York: Fordham University Press, 1999), 263.

[58] Quoted in anon., *Dublin Review* (May 1836): 110.

[59] Thomas Helmore, *Accompanying Harmonies to the Psalter Noted* (London: J. Alfred Novello, 1849), iii.

[60] Ibid., x.

expression. Independently, too, of their intrinsic qualities, their solemnity is heightened by their venerable antiquity, their association with the rites of religion, and their dissimilarity from the music of the world. Their effect upon the mind is derived from the same qualities, both intrinsic and associated, with that which is produced by the hollowed fanes of the middle ages, within whose walls they first resounded; and, when sung, in their pure state, either in unison, or with the simple harmony which belongs to them, they possess an awful grandeur which cannot be reached by the refinements and artifices of modern music.[61]

Thus, through its inherent theological integrity, Gregorian chant embodied the immanence of creation ("the natural or diatonic scale") and the transcendence of history ("venerable antiquity"), symbolizing what Staudenmaier terms the "absolute correspondence to the Divine idea."

Absolute correspondence dominates Victorian theological descriptions of chant's simplicity. A later writer for the *Dublin Review* resuscitates his earlier counterpart's model, emphasizing chant's indelible correspondence to humanity. One of the "great advantages of the simpler and more ecclesiastical style of music,"[62] he concludes, is the humility of chant's music in the face of its word's divinity:

> [T]he tones of the Church almost seem to withdraw themselves before the words upon which they are employed, as if conscious of their own feebleness, and only intent on throwing out their unspeakably wondrous and awful theme into the greatest possible prominence. We have heard it objected to the Ecclesiastical Chant that it is monotonous and inexpressive; this, as we apprehend, is the result of its very principle; it is modest and reverent, as knowing the poverty of human instruments in divine works.[63]

Encapsulating this view in "An Earnest Appeal for the Revival of the Ancient Plain Song," the renowned neo-Gothic architect and Protestant convert Augustus Welby Northmore Pugin (1812–52) decries the services of the Church as suffering from a "*want of reality*."[64] Like all conservative,

---

[61] Anon., *Dublin Review* (May 1836): 110.
[62] Anon., *Dublin Review* (September 1846): 203–4.
[63] Ibid., 209–10.
[64] A. Welby Pugin, *An Earnest Appeal for the Revival of the Ancient Plain Song* (London: Charles Dolman, 1851), 5, italics in original.

ultramontane Catholics, Pugin felt that anything failing to unify desecrates the name of God, and so music performed *to* a congregation rather than sung *by* it should be banned.[65] Contrast what he calls "that simple and divine song"[66] with the divisive excrescences of modern worship: "The distinct and graduated Chaunt offers no impediment to the perfect union of the heart and mind with the words, as they are sung; and in lieu of a mere empty and vain display of vocal eccentricities, we have a solemn, heartfelt, and, we may trust, an acceptable service to the honour of Almighty God."[67] For Pugin it comes down to a single theological truth: the "real music of the Church in all its purity" is the simplest, and it is the simplest because it is the earliest music, contemporary with its inception. Unlike Parry's chant, Pugin's "Chaunt" is not "incipient harmony" but ontologically complete, authoritative and perfect in itself—it is the very paradigm of divine simplicity:

> What can be more perfect, what more edifying and consoling than that divine office. . . . What appropriate fitness in all the antiphons—what noble simplicity in the hymns! while the Chaunt of the Psalter has an almost sacramental power in calming a troubled spirit and leading the soul to God; these were the divine Chaunts that penetrated the heart of St. Augustine.[68]

Pugin's choice of the word "sacramental" is telling because it signifies "the creaturely participation in God's existence,"[69] and through the absolute correspondence of His chant humans experience the perpetual recreation of the birth of Christ the Creator and Redeemer. Salvific, redemptive and incarnational, chant becomes a living symbol—a *reality* otherwise wanting in Pugin's estimation of the Church.

Reality appears to be wanting for many other theologically minded Victorians, amongst them Pugin's friend, fellow Anglican convert and Catholic priest Henry Formby (1816–84). Formby was at Oxford when the divisive, Catholicizing Oxford Movement was in full swing. He was a friend of its principal force—another, more famous Anglican convert, John

---

[65] For a good summary of the politics of English plainchant, see Thomas E. Muir, *Roman Catholic Church Music in England, 1791–1914: A Handmaid of the Liturgy?* (Aldershot: Ashgate, 2008), 95–107.

[66] Pugin, *Earnest Appeal*, 8.

[67] Ibid., 6–7.

[68] Ibid., 9.

[69] Dolezal, *God Without Parts*, 119, loc. 3356.

Henry Newman—and as a trained Anglican priest and later Roman Catholic priest, he was immersed in the highly charged theological debates of the time. Amongst Newman's most burning issues is the place of development in Christian history. As Frank Turner explains, for Newman Christianity was not "an idea of the disembodied Platonic sort to be grasped through refined intellection. Rather, Christianity understood historically resembled more nearly an Aristotelian form that must realize itself only through a material embodiment, in this case in the embodied material life of human beings in human society."[70] Unquestionably, for Formby (and Pugin) plain chant defines a central feature of that material embodiment, and Formby addresses it in the course of three uncompromisingly sacramental treatises, *The Catholic Christian's Guide to the Right Use of Christian Psalmody and of the Psalter* (1846); *The Plain Chant, the Image and Symbol of the Humanity of our Divine Redeemer and the Blessed Mary: A Discourse* (1848); and *The Roman Ritual and its Canto Fermo Compared with the Works of Modern Music in Point of Efficiency and General Fitness for the Purposes of the Catholic Church* (1849). Like Pugin's "Earnest Appeal," *The Catholic Christian's Guide*—dedicated, as it so happens, to Pugin— identifies chant with the indelible simplicity of creation: "Popular Christian Psalmody, in its simple form, is so little intricate, that it admits of being learnt, as language itself, without direct instruction."[71] But Formby goes much farther than Pugin, proselytizing chant as a militantly Christological ontology: "Ecclesiastical Song . . . has a mission to accomplish upon earth, intended by the Almighty, as well as the manner of its application to its end."[72] In contrast to other types of music, Formby's vision of chant remains determinedly simple in all its aspects of form and function: unlike harmonized music (often requiring professional performers), it is not the "song of artificial societies" but the real music of the real Christian Church, and it has within it "the idea of a people's song, a song capable of subsisting by tradition among the people."[73] Moreover, harmony unnecessarily distorts the clarity of words, and the numerous modes of chant are not limited to just the two measly scales of modern, harmonized music. Accordingly, there is no greater unity in diversity than in the unison singing of plain chant; it is the very epitome of divine simplicity itself:

---

[70] Frank M. Turner, "Newman," in Fergusson, ed., *Blackwell Companion to Nineteenth-Century Theology*, 128.

[71] Rev. Henry Formby, *The Catholic Christian's Guide to the Right Use of Christian Psalmody and of the Psalter* (London: Thomas Richardson and Son, 1846), 11.

[72] Rev. Henry Formby, "The Ecclesiastical Song" (no. 1), *The Tablet* 8, no. 361 (April 3, 1847), 211.

[73] Formby, *Catholic Christian's Guide*, 25–26.

The glorious type in nature of the Church's song, the unwearied and never-failing song of generations and ages, is the roar of the sea, whose waves beat in unison on the shore. Again, what is a more precious practical truth than Unity, the "Communio Sanctorum?" and how can there be on earth a more perfect typical expression of this, than the vast unisonous song of a multitude, who, with one mouth and one heart, glorify their God and their Redeemer—where the voices of all, young men and maidens, old men and children, are, as it were, the voice of one person.[74]

In *The Plain Chant*, and in his other writings, that one person is never just the Catholic Church, but God Himself: "The idea contained in the following pages, of the Song of the Divine Office being a symbol of our Lord's Incarnation, is but part of an idea capable of being exemplified in every means that the Catholic Church has taken to manifest the Godhead Incarnate, whose kingdom she is to men."[75] As exemplar of the Godhead Incarnate, chant was also "designed by our Divine Redeemer to pourtray [*sic*], in a perceptible and intelligible manner, the attributes and characteristics of the human nature, which He took to Himself from His blessed Mother, and this in the manner of an abiding manifestation of Himself in the Church."[76] Like all good Thomists, Formby relies upon divine simplicity to evoke a sacramental experience of God. Thomas claims that "[a] thing is seen in another through the image of that which contains it; as when a part is seen in the whole by the image of the whole; or when a man is seen in a mirror by the image in the mirror, or by any other mode by which one thing is seen in another."[77] Through this Formby arrives at his conclusion: "Song is gifted with the inherent capability of being a manifestation of our blessed Lord's humanity," and with "the mysterious power of symbolising the Man-God, and manifesting Him in a sacramental but intelligible manner to all who hear, and in an especial degree, to those who sing."[78] In *The Roman Ritual* Formby raises the theological stakes even higher, reasoning after Staudenmaier that the Thomistic mirror is nothing less that the Divine idea itself. Staudenmaier claims in *Die Lehre von der Idee* that "under the scheme of redemption man comes to the perfection of

---

[74] Ibid., 34.
[75] Rev. Henry Formby, *The Plain Chant, the Image and Symbol of the Humanity of our Divine Redeemer and the Blessed Mary: A Discourse* (London: James Burns, 1848), 4.
[76] Ibid., 9.
[77] Thomas Aquinas, *Summa Theologica* I.14.5; quoted in Dolezal, *God Without Parts*, 170, loc. 5495, n. 11.
[78] Formby, *Plain Chant*, 10, 13.

his nature, in the manner in which that perfection was contemplated in the Divine idea."[79] Helping man to realize the potential of that perfection is the "Incarnate Exemplar, or Pattern," but the Eternal Son no longer being visible, the Church has come "to supply His place, and by her varied means of instruction, to bring the knowledge of this Divine Exemplar home to the minds of all."[80] Plain chant is that means of instruction deriving from and leading towards the Exemplar or Pattern—it is the essence of divine simplicity, the "absolute correspondence to the Divine idea."

IV. CONCLUSION: SCIENCE AND RELIGION AT "PEACE"

While Formby goes out of his way to arm chant with a robust theology of divine simplicity, he is not unaware of its vulnerability under fire. Indeed, all of his writings attracted criticism, some more vociferous than others.[81] But one criticism constantly resurfaces, precisely because it gets right to the nub of the problem between theology and science: "[A]re not all men of one mind, in considering Plain Song to be comparatively barbarous?"[82] For science, "barbarous" chant evokes all the stereotypes of anthropological un- and under-development expostulated by Spencer and his acolyte Parry, as well as passively anti-Semitic historians like Hogarth, Stainer, Wylde and Weber. Yet for theology chant is divine simplicity itself. While Formby's response is predictable, his rhetoric is not. Turning the question around, and arguing that men who disagree with the irrefutable opinion of the saints are themselves barbarians, Formby points to an anthropology—a humanity and humanness—at the very root of his theological claims. Following Staudenmaier, Formby contends that, while in its divine simplicity chant is paradoxically natural and supernatural, human and divine, created and creating, it is above all things like Christ Himself in all his humanity. Formby's chant is literally human inspiration (in-spirit-ation) itself—the infusion and suffusion by and of the divine Spirit of Christ, and in its divine simplicity chant is the human incarnation of divine inspiration, the emblem—what Formby calls the "image"—of God in all His Glory. Chant is the "instinct with a *life* and animation that never fails."[83] Staudenmaier corroborates this for Formby, locating inspiration at the very nexus of natural and supernatural revelation.

[79] Quoted in Formby, *Roman Ritual*, xiv.
[80] Formby, *Plain Chant*, xiv.
[81] Zon, *English Plainchant Revival*, 237.
[82] Formby, *Catholic Christian's Guide*, 31.
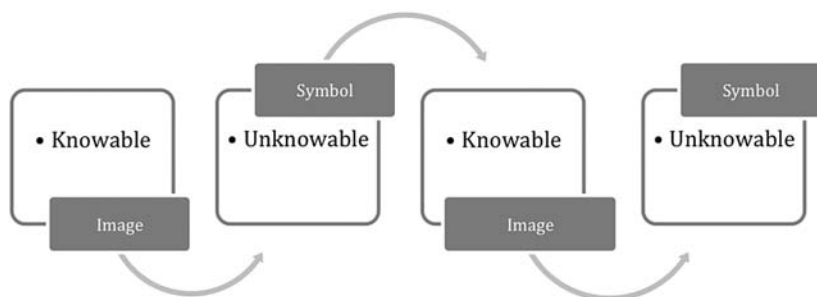[83] Formby, *Plain Chant*, 12, italics in original.

FIGURE 5: Knowable and Unknowable, Image and Symbol.

According to James Burtchaell, Staudenmaier believes that "God does not speak directly to man; he acts for man to see. In inspiration he gives man an insight into the divine life within himself. And with the eye of faith one can see in the chronicle of human events the sacred story of the upbuilding of God's kingdom."[84]

Formby and Pugin claim that chant is and represents simplicity inhering within both human and divine simplicity; like other apologists they humanize chant to spiritualize it. For them, chant not only embodies and symbolizes the totality of divine simplicity, it also exemplifies a universal spiritual trajectory towards God. For Formby it is "a guide," aiding man's progress from the baseness of his lowest human form to the perfection of his highest spiritual condition. For Spencer that progress is entirely secular, though no less teleological. It is the simple becoming complex, the savage becoming civilized and the ontogeny recapitulating phylogeny. It is the purely human equivalent of divine simplicity, the Known becoming Unknown. It is also the human analogue to what Formby calls in the subtitle to *The Plain Chant* the "Image and Symbol of the humanity of our divine redeemer." As portrayed above in Figure 5, like the Knownable and Unknownable, the Image becomes the Symbol becoming the Image becoming the Symbol in eternally overlapping serial replacements.

Theologian Jacques Maritain describes it as "a limitless instant which indivisibly embraces the whole succession of time."[85] The Known and Unknown, Image and Symbol—these are both in their ways prime examples of the Great Chain of Being: Spencer's, like Bonnet below in Figure 6, rising

---

[84] James Tunstead Burtchaell, *Catholic Theories of Biblical Inspiration Since 1810* (Cambridge: Cambridge University Press, 1969), 22.

[85] Jacques Maritain, *Existence and the Existent: The Christian Answer*, trans. Lewis Galantière and Gerald B. Phelan (New York: Pantheon, 1948), 113–14.

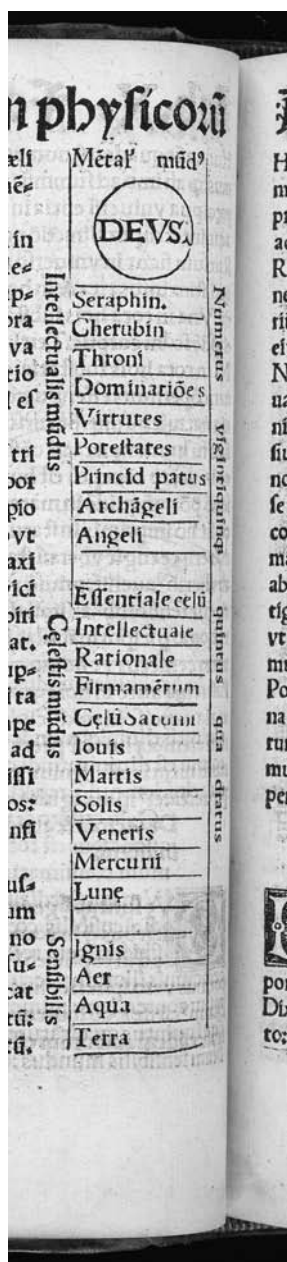FIGURE 6a: Charles Bonnet, *Traité d'insectologie* (1745).

FIGURE 6b: *Contemplation de la nature* (1764) and Charles de Bouel-les, *Physicorum elementorum* (1512). Permission granted, Wellcome Library, London.

to man; and Formby's, like Charles de Bouelle's much earlier example, ascending to God. It is these same structural similarities which weaken any argument for protracted warfare between Victorian science and theology.

Indeed, these similarities make it seem as if science and theology are more at peace than at war; the realities of difference do little to dispel this impression. Although Spencer was an avowed agnostic, his synthetic philosophy is steeped in transcendentalism; although Parry was a confirmed Anglican, his musicology was deeply evolutionary; and although Formby and Pugin wore their zealous Catholicism on their sleeves, there is an abiding anthropological understanding at the base of their theological beliefs. Their theology is anthropological; Spencer's science, metaphysical, and they bridge the language and doctrine of simplicity—be it human or divine.

Is this a muddle? Yes. Is it war? Yes. Is it peace? Yes to all these questions. The fact is that science and theology in Victorian culture were often conflicted but not disaggregated. Although some might have us believe differently, Christian Darwinists and Christian Darwinisticists spoke much the same language—and none of it was consistently or particularly Darwinian, as Peter Bowler has abundantly pointed out.[86] The same period that produced Lyman Abbot's *Theology of an Evolutionist* (1897) also produced Thomas Huxley's "The Evolution of Theology: An Anthropological Study" (1886), and this must say something serious about the closely interwoven relationship of Victorian science and theology. What it says is that the divisions which White and Draper contend define the period are possibly more ideological than disciplinary and more political than ideological. It is clear that while neither openly opposed theology, Draper was anti-Catholic and White loathed dogmatic theology.[87] It is also clear that no matter how much Darwin tried to exorcise intelligent design from evolution, for many the theological argument behind Paley's parable of the watch proved tenacious. Why Paley describes some parts of God's universe as simple and others complex is anybody's guess, but the concept of contrivance lived on throughout the Victorian period, and it continues even today in the most advanced retellings of Paley's watch as biochemical encoding.[88] It lives on because contrivance implies complexity but means simplicity. And it is the concept of simplicity, not complexity, which lies at the root of Victorian sciences of chant—sciences which would eventually grow into modern

---

[86] See Bowler, *Non-Darwinian Revolution*.

[87] James C. Livingston, "Natural Science and Theology," in Fergusson, ed., *Blackwell Companion to Nineteenth-Century Theology*, 141.

[88] For one of the most renowned arguments, see Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Simon & Schuster, 1996).

musicology, or what the great German musicologist Guido Adler would call *Musikwissenschaft*, literally the science of music.[89] And it is the concept of simplicity, not complexity, which lies at the root of Victorian theologies of chants—theologies which would come to develop *Kunstreligion*, literally the religion of art and "the belief that art manifests the divine."[90] And while science and theology would eventually come to separate into respective disciplines early in the twentieth century, in Victorian musical culture chant and the discourse of simplicity forced them to communicate, uniting them, dividing them and muddling them in turn, like Spencer's Known and Unknown or Formby's Image and Symbol. Chant may have confused as much as it clarified, but through it and its simplicity, Victorian science and theology would define their boundaries, stake their claims and prepare for the long ideological battles ahead.

Durham University.

---

[89] Erica Mugglestone, "Guido Adler's 'The Scope, Method, and Aim of Musicology' (1885): An English Translation with an Historico-Analytical Commentary," *Yearbook for Traditional Music* 13 (1981): 1–21.
[90] Elizabeth A. Kramer, "The Idea of *Kunstreligion* in German Musical Aesthetics of the Early Nineteenth Century" (Ph.D. diss., University of North Carolina at Chapel Hill, 2005), 1.